

The MACIV project



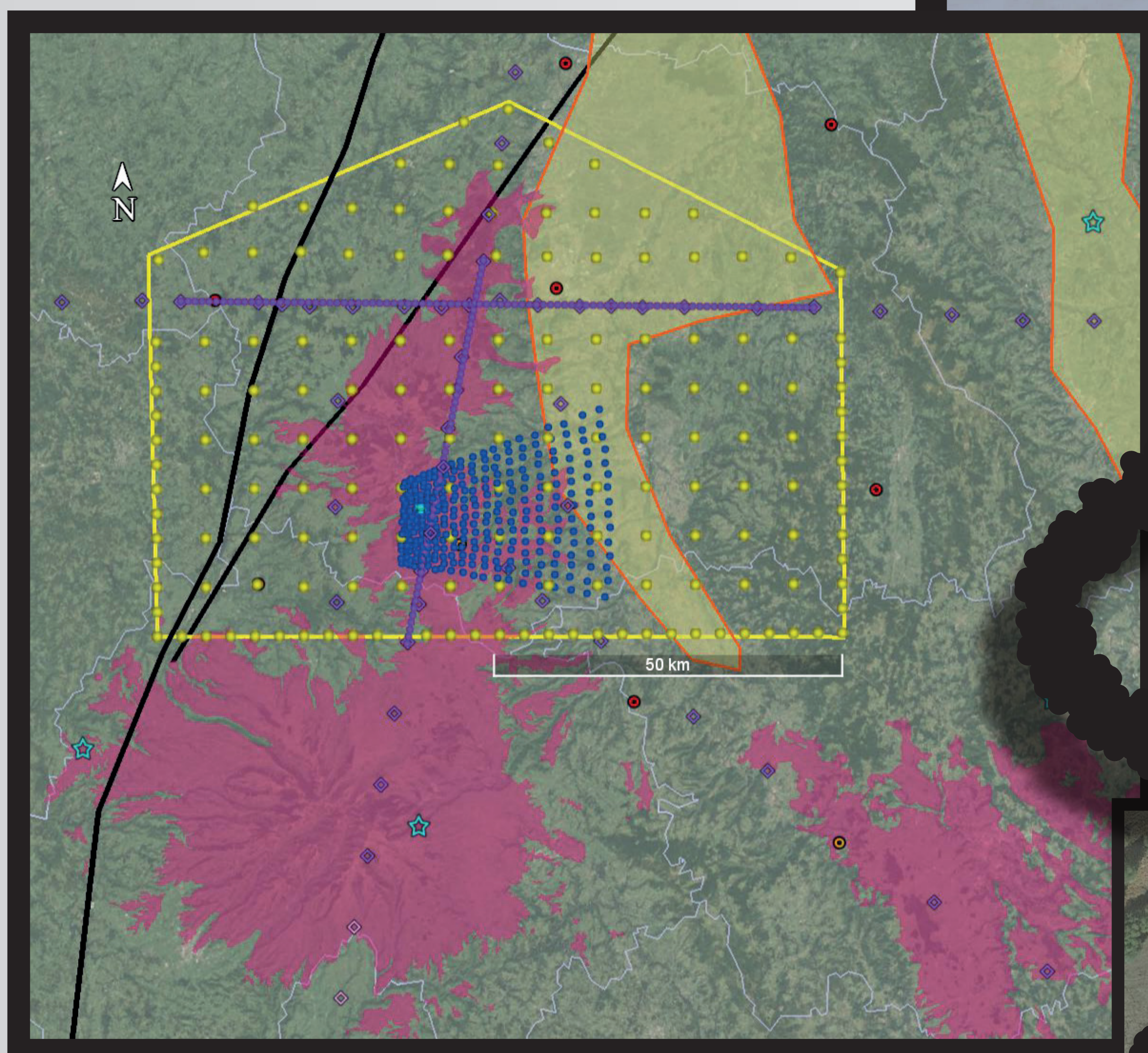
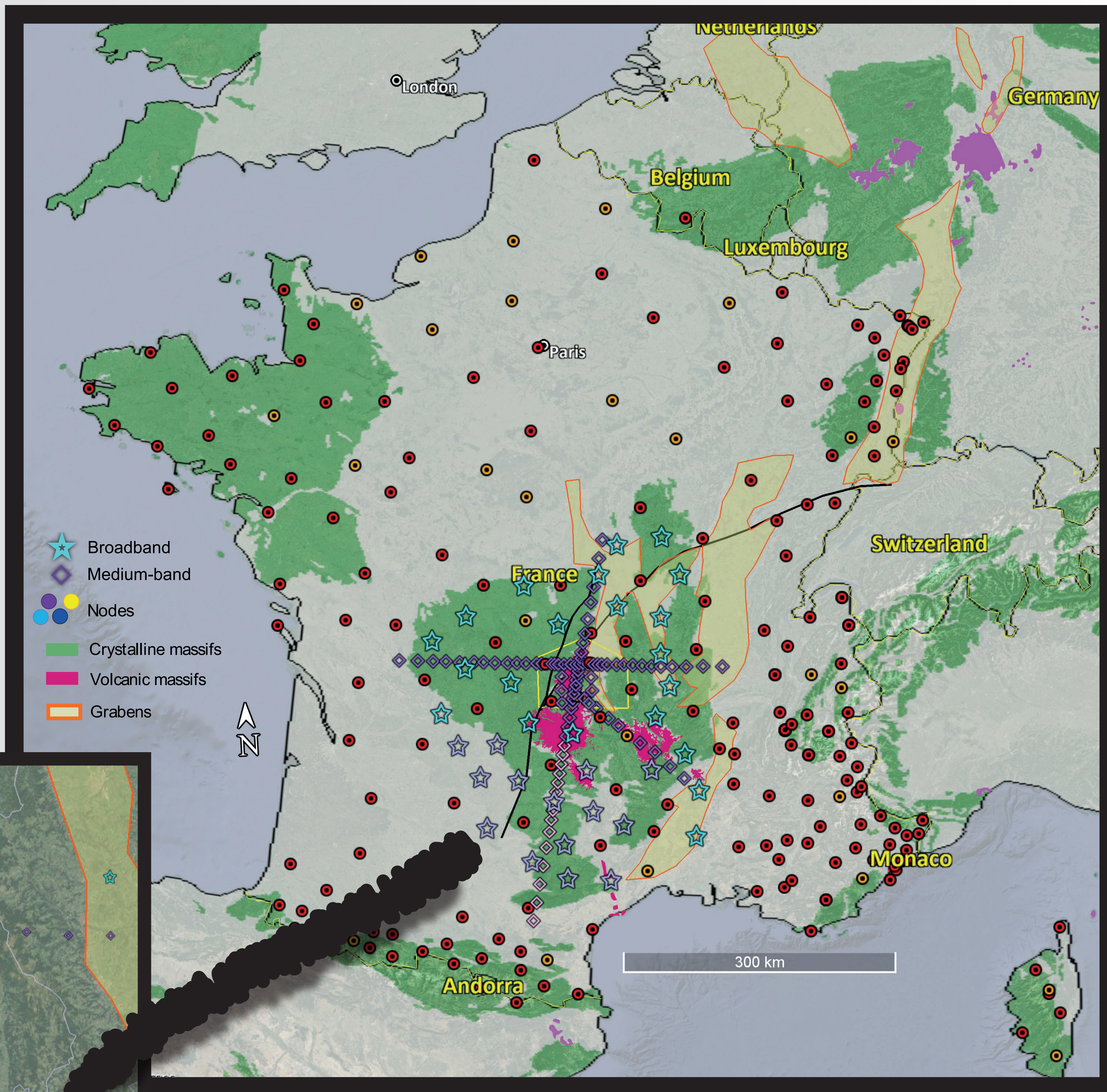
Multiscale seismic imaging of MAssif Central
focusing on recent Intraplate Volcanism



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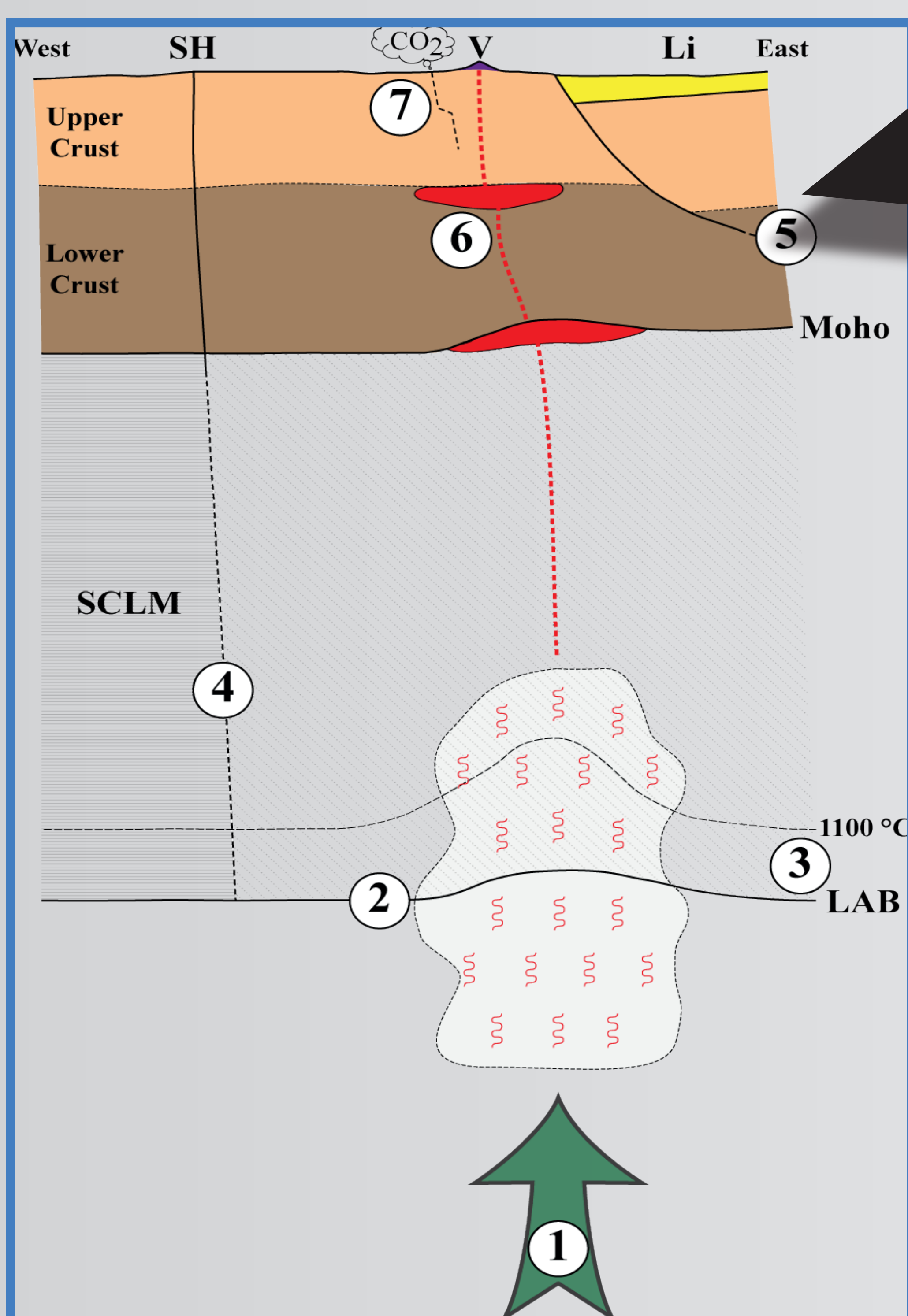
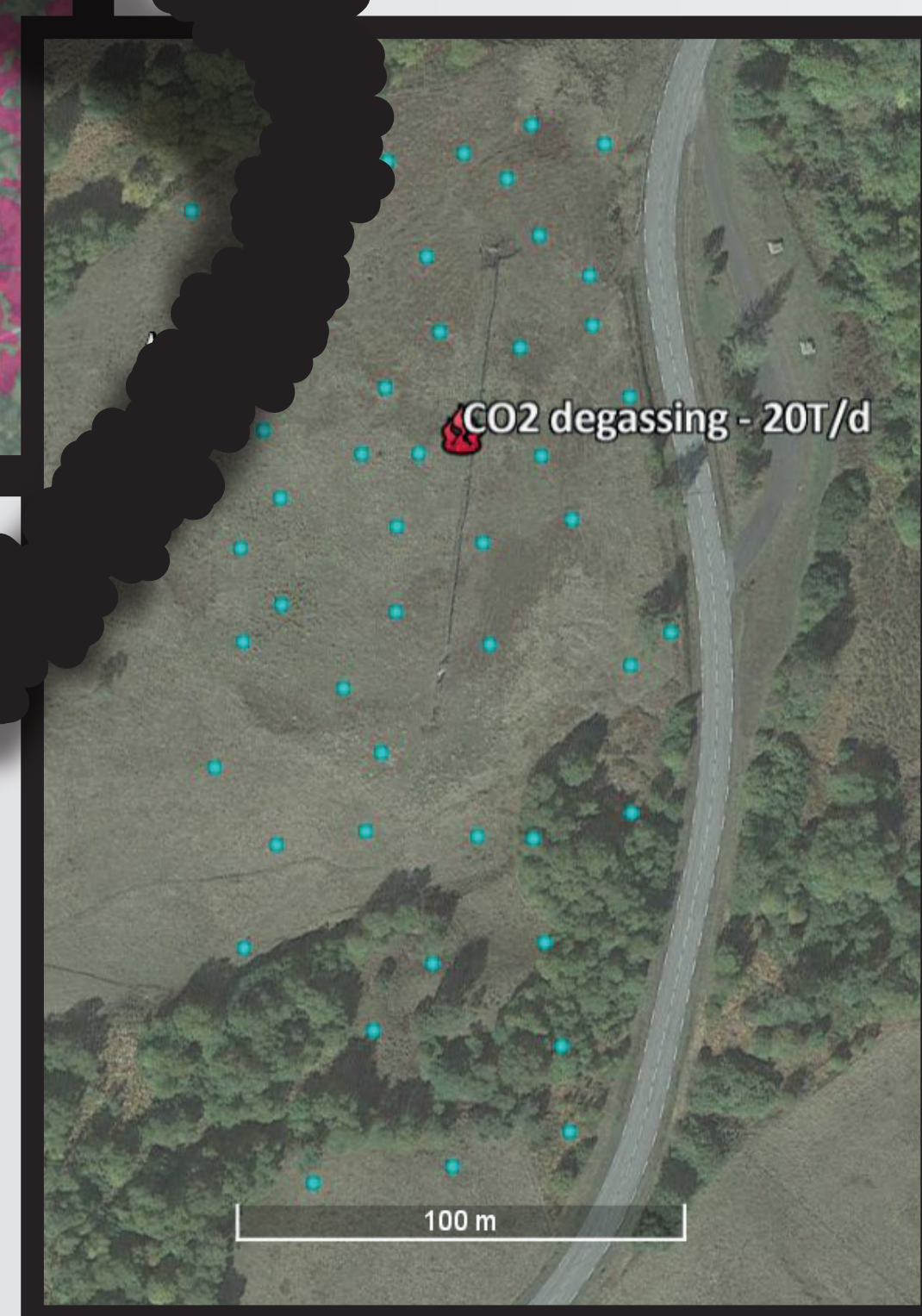
MACIV in numbers

- 5 institutes
- 38 researchers and engineers
- 828 k€ of budget
- 5 years duration
- More than 770 seismic stations
 - 35 telemetered broadband
 - 85 telemetered medium-band
- 650+ nodes



Multiscale arrays

- Densification of the French permanent network over the Massif-Central
- Profiles crossing the main volcanic centers
- Dense networks of Nodes centered on the youngest volcanoes: Chaîne des Puys, Monts Dore, Lac Pavin and Escarot mofette



Scope of work and research questions

1. Causes and geometry of the mantle upwelling under the Massif Central
2. Mantle sources depth, mineralogical and geochemical characteristics
3. P-T conditions of the melt.
4. Internal structure of the Sub-Continental Lithospheric Mantle (SCLM), control of lithospheric scale discontinuities and Variscan legacy on Cenozoic geodynamics and volcanism.
5. Internal structure of the crust
6. Magma conduit systems, depth of magma chambers and hypothesis of their activity under the Chaîne des Puys.
7. CO2 degassing at the Escarot mofette and mantle gas conduits